

WHAT IS CLAIMED IS:

1. A speech recognition support method applied to a system to retrieve a map in response to a user's input speech, comprising the steps of:

assigning a recognition result to the user's input speech;

calculating, if the recognition result of the user's input speech represents a point on the map, a distance between the point and a base point on the map;

deciding whether the distance is above a threshold;  
and

outputting, if the distance is above the threshold, an inquiry to confirm whether the recognition result is correct.

2. The speech recognition support method according to claim 1,

further comprising the step of:

if the distance is not above the threshold,

outputting the recognition result without the inquiry.

3. The speech recognition support method according to claim 1,

further comprising the step of:

if the recognition result does not represent a point

on the map,

previously determining to output the recognition result with the inquiry or without the inquiry.

4. A speech recognition support method applied to a system to retrieve a map in response to a user's input speech, comprising the steps of:

recognizing the user's input speech;

obtaining a plurality of recognition candidates as the recognition result;

extracting, if the first candidate in the plurality of recognition candidates represents a point on the map, the recognition candidates each representing a point on the map from the plurality of recognition candidates;

calculating a score of each of the extracted recognition candidates by adding a function value of distance between a point of each recognition candidate and a base point on the map to a value of similarity degree between the each recognition candidate and the input speech;

deciding whether the distance of the recognition candidate of the highest score is above a threshold; and

outputting, if the distance is above the threshold, an inquiry to confirm whether the recognition candidates of predetermined number of higher score are correct to the user in order.

5. The speech recognition support method according to claim 4,

further comprising the step of:

if the first candidate does not represent the point on the map,

outputting the first rank candidate without the inquiry.

6. The speech recognition support method according to claim 4,

wherein the score of each of the extracted recognition candidates is a weighted sum of the function value of distance and the value of similarity degree.

7. The speech recognition support method according to claim 4,

further comprising the steps of:

arranging each of the recognition candidates in order from the highest score to the lowest score; and

extracting one recognition candidate of the highest score from the arranged recognition candidates.

8. The speech recognition support method according to claim 4,

further comprising the step of:

if the distance is not above the threshold,  
outputting the recognition candidate of the highest  
score without the inquiry.

9. The speech recognition support method according to  
claim 4,

further comprising the step of:

outputting the inquiry to confirm each recognition  
candidate is correct in order of higher score of the  
extracted recognition candidates.

10. The speech recognition support method according  
to claim 9,

further comprising the step of:

if the user's confirmation is input to one recognition  
candidate outputted,

executing a processing for the one recognition  
candidate without outputting the inquiry of remaining  
recognition candidates.

11. The speech recognition support method according  
to claim 1,

further comprising the step of:

if the map is enlarged according to a predetermined  
magnification ratio,

changing the threshold in proportion to the

magnification ratio; and

deciding whether the distance is above the changed threshold.

12. The speech recognition support method according to claim 1,

further comprising the step of:

if the map including a base area is enlarged according to predetermined magnification ratio and the base area includes the base point,

deciding whether the point of the recognition result is included in the base area.

13. The speech recognition support method according to claim 1,

further comprising the step of:

if a plurality of points on the map are hierarchically arranged by place name from high level to low level,

deciding whether a point of the recognition result and the base point belong to the same place name of a higher level.

14. The speech recognition support method according to claim 13,

further comprising the step of:

if the point of the recognition result and the base

point do not belong to the same place name of a higher level,

outputting the inquiry to confirm whether the recognition result is correct to the user.

15. The speech recognition support method according to claim 13,

further comprising the step of:

if the point of the recognition result is the place name of the highest level,

outputting the inquiry to confirm whether the recognition result is correct to the user.

16. The speech recognition support method according to claim 4,

further comprising the steps of:

if the first rank candidate in the plurality of recognition candidates represents a point on the map,

calculating a confidence degree by dividing a time length of the input speech into the similarity degree between the first rank candidate and the input speech; and

deciding whether the confidence degree is above a threshold.

17. The speech recognition support method according to claim 16,

further comprising the step of:  
if the confidence degree is above the threshold,  
outputting the first rank candidate without the  
inquiry.

18. The speech recognition support method according  
to claim 16,

further comprising the steps of:  
if the confidence degree is not above the threshold,  
extracting the recognition candidates each  
representing a point on the map from the plurality of  
recognition candidates;

calculating the score of each of the extracted  
recognition candidates;

calculating a distance between a point of the  
recognition candidate of the highest score and the base  
point on the map; and

deciding whether the distance is above a threshold.

19. A speech recognition support apparatus for  
retrieving a map in response to a user's input speech,  
comprising:

a speech recognition unit configured to assign a  
recognition result to the user's input speech;

a distance decision unit configured to calculate a  
distance between a point of the recognition result and a

base point on the map if the recognition result represents a point on the map, and to decide whether the distance is above a threshold; and

a response generation unit configured to generate an inquiry to confirm whether the recognition result is correct if the distance is above the threshold.

20. A speech recognition support apparatus for retrieving a map in response to a user's input speech, comprising:

a speech recognition unit configured to recognize the user's input speech and to obtain a plurality of recognition candidates as the recognition result;

a distance decision unit configured to extract the recognition candidates each representing a point on the map from the plurality of recognition candidates if the first candidate represents a point on the map, to calculate a score of each of the extracted recognition candidates by adding a function value of distance between a point of each recognition candidate and a base point on the map to a similarity degree between the each recognition candidate and the input speech, and to decide whether the distance of the recognition candidate of the highest score is above a threshold; and

a response generation unit configured to generate an inquiry to confirm whether the recognition candidates of



predetermined number of higher score are correct in order if the distance is above the threshold.

21. A computer readable memory containing computer readable instructions in a system to retrieve a map in response to a user's input speech, comprising:

instruction means for causing a computer to assign a recognition result to the user's input speech;

instruction means for causing a computer to calculate, if the recognition result of the user's input speech represents a point on the map, a distance between the point and a base point on the map;

instruction means for causing a computer to decide whether the distance is above a threshold; and

instruction means for causing a computer to output, if the distance is above the threshold, an inquiry to confirm whether the recognition result is correct.

22. A computer readable memory containing computer readable instructions in a system to retrieve a map in response to a user's input speech, comprising:

instruction means for causing a computer to recognize the user's input speech;

instruction means for causing a computer to obtain a plurality of recognition candidates as the recognition result;

instruction means for causing a computer to extract, if the first candidate in the plurality of recognition candidates represents a point on the map, the recognition candidates each representing a point on the map from the plurality of recognition candidates;

instruction means for causing a computer to calculate a score of each of the extracted recognition candidates by adding a function value of distance between a point of each recognition candidate and a base point on the map to a value of similarity degree between the each recognition candidate and the input speech;

instruction means for causing a computer to decide whether the distance of the recognition candidate of the highest score is above a threshold; and

instruction means for causing a computer to output, if the distance is above the threshold, an inquiry to confirm whether the recognition candidates of predetermined number of higher score are correct in order.